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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/780,861	02/19/2004	Hironori Endo	Q79907	1968
23373	7590	11/03/2004	EXAMINER	
SUGHRUE MION, PLLC 2100 PENNSYLVANIA AVENUE, N.W. SUITE 800 WASHINGTON, DC 20037			HUFFMAN, JULIAN D	
			ART UNIT	PAPER NUMBER
			2853	

DATE MAILED: 11/03/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/780,861	Applicant(s) ENDO, HIRONORI	
	Examiner Julian D. Huffman	Art Unit 2853	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☒ Claim(s) 15 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☒ Certified copies of the priority documents have been received in Application No. 10/370,070.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>2/19/04</u> . | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Claim Rejections - 35 USC § 101

1. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

The following is a quotation of MPEP 2106 IVB1a:

Data structures not claimed as embodied in computer-readable media are descriptive material per se and are not statutory because they are not capable of causing functional change in the computer. See, e.g., *Warmerdam*, 33 F.3d at 1361, 31 USPQ2d at 1760 (claim to a data structure per se held nonstatutory). Such claimed data structures do not define any structural and functional interrelationships between the data structure and other claimed aspects of the invention which permit the data structure's functionality to be realized. In contrast, a claimed computer-readable medium encoded with a data structure defines structural and functional interrelationships between the data structure and the computer software and hardware components which permit the data structure's functionality to be realized, and is thus statutory.

The following is a quotation of MPEP 706.03(a) [R-2] IA:

For example, a mere arrangement of printed matter, though seemingly a "manufacture," is rejected as not being within the statutory classes. See *In re Miller*, 418 F.2d 1392, 164 USPQ 46 (CCPA 1969); *Ex parte Gwinn*, 112 USPQ 439 (Bd. App. 1955); and *In re Jones*, 373 F.2d 1007, 153 USPQ 77 (CCPA 1967).

The invention of claim 12 is rejected under 35 U.S.C. 101 as being directed to non-statutory subject matter. The pattern claimed in claim 12 may be considered data, for example if the pattern was to be used by the computer to program the printer to print the pattern, or as printed matter, for example if the pattern claimed refers to the pattern that is to be printed on the media, in either case, the claimed invention which is directed solely to the pattern, is non-statutory. Applicant should amend the claim to connect the abstract pattern to some physical object which permits the functionality of the pattern to be realized. It is respectfully suggested that applicant claim a storage medium having a program for recording a carry amount correction pattern.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 3, 4, 6, 7, 9-11 and 13 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 3 recites the limitation "the pattern rows... are printed".

Claim 4 recites the limitation "the plurality of patterns... are formed".

Claim 6 recites the limitation "pattern printed".

Claim 7 recites the limitation "said patterns are formed".

Claim 9 recites the limitation "pattern... that is printed".

Claim 11 recites various limitations such as “the pattern rows, which are arranged in rows, are printed...”, “the plurality of patterns for each of said virtual circumference segments corresponding to one correction amount are formed...”, etc.

The parent claims do not positively recite the formation of the pattern, only that the apparatus is capable of forming the pattern, therefore subsequent language such as “the printed pattern”, which requires the pattern to be printed, is indefinite.

These claims could not be properly examined since it is not clear if the pattern is capable of being printed, or if the pattern is actually printed.

In claim 4, the term “the plurality of patterns for each of said virtual circumference segments corresponding to one correction amount” lacks antecedent basis. It is respectfully suggested that claim 4 be made dependent from claim 5.

In claims 10 and 11, the last line is unclear.

Claim 13 recites “a storage medium having a program recorded thereon” and “a memory storing the program”. The recitation of the memory storing the program is redundant since the storage medium is the memory. It is not clear how a storage medium can have a memory. It is also not clear as to how a program can be capable of performing something. A program either performs set instructions, or does not perform these instructions.

This claim could not be properly examined since it is not clear if the program performs the functions, or is capable of performing the functions.

Though many of the claims could not be properly examined due to indefiniteness arising from the use of the language capable of, an attempt has been made to apply art to the claims using the broadest reasonable interpretation of the claims. Prior art which is capable of providing the structure or performing the operations teaches applicant's claimed invention.

Claim Objections

4. Claims 1, 11, 12, 13 and 15 are objected to because of the following informalities:

The language "setting a correction amount corresponding to one of the patterns to each said virtual circumference segment", as found in the last two lines of claims 1, 13, 14 and 15 and line 12 of claim 11 are unclear. The following correction is respectfully suggested: "for each virtual circumference segment, setting a correction amount corresponding to one of the patterns".

In claim 12, the word "pattern" in line 1 should be changed to "patterns".

Appropriate correction is required.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1-11, 13 and 14 are rejected under 35 U.S.C. 102(b) as being anticipated by Arquilevich et al. (U.S. 6,137,592).

With regards to claims 1-11, Arquilevich et al. discloses a printing apparatus comprising :

a carry roller (52) for carrying a print sheet (44);

wherein said carry roller has virtual circumference segments that are obtained by virtually dividing a circumference of the carry roller into a plurality of segments in a direction in which the carry roller is rotated (fig. 2);

a print head for printing while performing scanning in a direction that is perpendicular to a carry direction of said print sheet (38);

said print head has a plurality of nozzles that are arranged in the carry direction of said print sheet and that are capable of ejecting ink (fig. 2).

With regards to claim 13, Arquilevich et al. also discloses a computer program for controlling the printer (fig. 1).

With regards to claim 14, Arquilevich et al. discloses a computer main unit (fig. 1) and a printer having the structure discussed above, connected to the computer main unit.

With regards to the limitations which follow the language capable of, Arquilevich et al. is capable of performing the claimed functions or providing the claimed test pattern and correction since Arquilevich et al. discloses the carry roller, printer which prints test patterns and selection unit.

The device of Arquilevich et al. is capable of printing any type of pattern enabling correction of the media advance using the printer roller and using any type of selection algorithm to select an appropriate correction pattern(s).

7. Claims 1-11, 13 and 14 are rejected under 35 U.S.C. 102(b) as being anticipated by Beauchamp et al. (U.S. 6,137,592).

With regards to claims 1-11, Beauchamp et al. discloses a printing apparatus comprising :

a carry roller (fig. 3, element 154) for carrying a print sheet;

wherein said carry roller has virtual circumference segments that are obtained by virtually dividing a circumference of the carry roller into a plurality of segments in a direction in which the carry roller is rotated (fig. 3);

a print head for printing while performing scanning in a direction that is perpendicular to a carry direction of said print sheet (100);

said print head has a plurality of nozzles that are arranged in the carry direction of said print sheet and that are capable of ejecting ink (fig. 16).

With regards to claim 13, Beauchamp et al. also discloses a computer program for controlling the printer (fig. 10, element 314).

With regards to claim 14, Beauchamp et al. discloses a computer main unit (fig. 10, element 314) and a printer having the structure discussed above, connected to the computer main unit.

With regards to the limitations which follow the language capable of, Beauchamp et al. is capable of performing the claimed functions or providing the claimed test pattern and correction since Beauchamp et al. discloses the carry roller, sensor, printer printing test patterns and selection unit. The device of Beauchamp et al. is capable of printing any type of pattern enabling correction of the media advance using the printer roller and using any type of selection algorithm to select an appropriate correction pattern(s).

Allowable Subject Matter

8. The prior art of record does not disclose setting a correction amount corresponding to one of the patterns to each virtual circumference segment.

The prior art of record prints a plurality of patterns using virtual circumference segments of a roller, but does not set a correction amount for each virtual circumference segment.

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Julian D. Huffman whose telephone number is (571) 272-2147. The examiner can normally be reached on 9:30a.m.-6:00p.m. Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Meier can be reached on (571) 272-2149. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



JH



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